TECHNICAL BOOK REVIEW INDEX

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JULIA C. WALLACE, *Editor*

Volume 13 **December, 1947** **Number 10**

THE purpose of the Technical Book Review Index is primarily to identify reviews in current scientific, technical, and trade journals; secondarily, when feasible, to quote from these reviews. In the evaluation of scientific and technical books, reviews constitute the best existing source of information. The service of the Technical Book Review Index is thus in the field of evaluation, rather than in competition with existing publications which announce new and forthcoming books, list books by subjects, or supply bibliographic information. Each quotation immediately follows the name of the journal from which it is taken. Obviously, these brief extracts, detached from the context, must not be accepted as conclusive. Except for the correction of obvious errors, the bibliographic information is as given in the reviews. It is, therefore, in many cases incomplete and in some cases probably inaccurate.

Adams, H. S. Milk and food sanitation practice. 311p. 1947. Commonwealth Fund, New York, $3.25.

American journal of public health, Oct. 1947, p.1347. ⅓ col.

"A well written and practical source of general information on milk and restaurant sanitation for health officials . . . Appears to have been written for and accomplishes the purposes of giving administrators basic information in these branches of environmental sanitation for which there has been need. The views expressed are fairly representative of modern practice. The eleven appendicies [sic] contain much additional material in the form of references, information about field equipment and tests, and an outline of a course for the instruction of food handlers." *Walter D. Tiedeman.*

Journal of milk and food technology, Sept.-Oct. 1947, p.303. 1⅙ col.

"An excellent book written by a practicing food sanitarian for food sanitarians . . . This is the first manual which, to this reviewer, combines the whole subject of milk and food sanitary control in a single volume, arranged as a practical guide for the fieldman, and especially adapted to those who do not have more specialized training. It is a valuable addition to our growing literature in milk and food sanitation control. The author and publisher did a good and useful job."

Allen, Arthur A. Ornithology laboratory notebook. Ed.5. 256p. 1947. Comstock Pub. Co., Ithaca, N. Y., $4.

Audubon magazine, Nov.-Dec. 1947, p.373. 9 l.

"This new edition has been expanded to make it more usable throughout all of North America . . . Not intended as a book about birds, as it is largely just a series of blank forms to be used by a student to record the data obtained during a course in ornithology. Actually it does have a useful bibliography, keys to bird orders and families, a key to bird nests of the Northeast and a brief summary of summer and winter ranges."

Allen, Oliver F. Modern Diesel. 268p. 1947. Prentice-Hall, New York, $5.

Industry and power, Nov. 1947, p.116. ⅛ col.

"An interesting and well written history of the development of the Diesel engine from the ideas of Carnot up to the modern high speed engine of today. While the book can in no way be considered as a text for technical treatment of the subject the material presented is of interest to every engineer since every phase of Diesel development is covered. Much of the story may be said to be told by pictures which include illustrations of typical equipment manufactured in this country and abroad and which demonstrates far more adequately than possible with any description just how the numerous improvements have come about."

Military engineer, Nov. 1947, p.503. ⅛ col.

"A history of the diesel engine from its inception in the mind of the inventor to the modern engine we know today as the Diesel . . . Over 180 illustrations add to the clarity of the book. A list of questions on each chapter together with an index complete this excellent dissertation on the diesel."

Amick, Charles L. Fluorescent lighting manual. Ed.2, revised. 318p. 1947. McGraw, New York, $4.

American machinist, Nov. 6, 1947, p.196. ⅛ col.

"Explanations of the cold-cathode lamp, Circuline and Thinline tubes are completely covered as well as the standard hot-cathode lamps. Operating characteristics, auxiliary equipment, installation hints and service suggestions, treated as individual subjects, will prove invaluable to the maintenance man. The design engineer will find useful chapters on luminaire selection, lighting design, color quality, application and lighting economics. Also covered are basic suggestions for eliminating radio interference which for sometime has proved annoying in the installation of fluorescent lamps in the home and other living quarters."

Electrical construction and maintenance, Oct. 1947, p.194. ⅝ col.

"Includes the latest available information on all the new types and sizes of fluorescent lamps, auxiliary equipment improvements, and recent lighting techniques. New design data have been incorporated wherever possible, and sections have been added on lighting comfort. For those who design, sell, install, service or use modern fluorescent lighting systems, this manual will prove invaluable as a reference source . . . All technical data which may be required on fluorescent lighting by fluorescent equipment manufacturers, electrical contractors, dealers, lighting engineers and designers, maintenance men and users, is [sic] given . . . Written in an easy to understand style from a practical viewpoint."

Factory management and maintenance, Oct. 1947, p.270. ⅛ col.

"A reference manual covering the principles of operation, design, construction, and performance characteristics of all types of fluorescent lamps. It emphasizes practical installation design and service procedures, shows methods of calculating illuminating requirements, provides guidance for maintenance and repair of fluorescent lighting equipment."

Anderson, C. G. Bacteriological chemistry. Ed.2, revised. 500p. 1947. Livingstone, Edinburgh, 20s.

Pharmaceutical journal, Sept. 13, 1947, p.187. ⅛ col.

"Second edition of a book which was welcomed as breaking fresh ground in that it dealt with the newly developing subject of bacteriological chemistry as studied in the course for the London post-graduate diploma in bacteriology. There is now much that is new to record and discuss, and the second edition includes the more recent developments and expands the field." *H. Berry.*

Andrews, Henry N., jr. Ancient plants and the world they lived in. 279p. 1947. Comstock Pub. Co., Ithaca, N. Y., $4.50.

Scientific American, Oct. 1947, p.187. ⅛ col.

"Paleobotany, the science of the past evolution of the vegetable kingdom, is a fascinating study but unfortunately most technical. This book by a paleobotanist, weeds out the technicalities. As paleobotany it would rate as decidedly light but as popular writing it would rate average. Suitable for readers having serious interest in pure science and for the 'rock hounds' (amateur mineral collectors) who now abound. It is of interest to find that so many modern plants—the pines, for example—remain essentially unchanged since 60,000,000 or more years ago, as proved by perfectly preserved fossils." *A. G. I.*

Scientific monthly, Nov. 1947, p.439. 1⅛ col.

"Few books of strictly scientific information are as interesting and readable as Dr. Andrews' concise volume on ancient plants. Actually, the book is more than the title implies, for its content is not confined to discussions of plant fossils, but is really a series of treatises on the evolution of various plant groups from their first known beginnings in past ages to their modern descendants. Included also are related topics, such as the constitution of coal, climates of past ages as indicated by fossils, genealogies in the plant kingdom, and a short review of the development of paleobotanical science." *Raymond E. Janssen.*

Bennison, Ernest W. Ground water; its development, use and conservation. 509p. 1947. Edward E. Johnson, Inc., St. Paul, Minn., $2.25.

Engineering news-record, Oct. 2, 1947, p.110. ½ col.

"Dedicated to well-drillers, but broad enough in scope to interest all who are concerned with the development, use or conservation of groundwater, Mr. Bennison's compilation of articles that originally appeared in the *Johnson National Driller's Journal* over a six-year period shapes up into a book that is rich in practical value . . . Intended to present basic principles of groundwater hydrology, well construction and the techniques most commonly used in developing and pumping groundwater. This emphasis on the practical aspects will be appreciated by waterworks men . . . In brief, this is a lot of book for the money."

Bloxham, S. G. Practical aircraft hydraulics. 146p. 1947. Pitman, London, 18s.

Aeronautical engineering review, Oct. 1947, p.63. ⅝ col.

"A great deal of practical information about hydraulics as applied to aircraft is presented . . . Intended primarily for the use of engineering students and those seeking aircraft engineers' licenses, and the author has succeeded in his aim to make it a thoroughly practical discussion."

Aeroplane, Sept. 26, 1947, p.453. ½ col.

"Intended to be of service to engineering students and those studying for Aircraft Engineers' Licences. Unfortunately, the author's experience seems to have been limited to a few particular types of aircraft and most of the equipment described relates to the Mosquito, which for war-time production reasons used hydraulic equipment mainly designed about 10 years ago . . . Some serious errors or omissions occur in the book . . . Where the book is of value, however, and the author on surer ground is in the description of purely practical problems of maintenance, installation and overhaul. Information on pipe fittings, installation and alignment of hydraulic jacks, priming and bleeding the system, and manufacturing defects in hydraulic equipment is useful and authoritatively given . . . The published price of 18s. seems high for a book of this nature." *H. G. C.*

Brand, Louis. Vector and tensor analysis. 439p. 1947. Wiley, New York, $5.50.

Electronics, Sept. 1947, p.263. 11 l.

"The subject is presented in the form of assertions about the mathematical properties of vectors and tensors, thus giving a grounding in their characteristics and manipulation. However, the mathematical rigor is at times incomplete, and the application of the techniques to engineering is only sketchy, so that the book is more suited to college courses than personal study." *F. R.*

Proceedings of the I.R.E., Nov. 1947, p.1339. 1 col.

"Although not primarily intended as a text, the fundamental nature of the presentation and the inclusion of many problems well adapts this book to a course in vector analysis and a short course in tensor analysis. Despite the preponderance of applications to the fields of mechanics, differential geometry, and hydrodynamics, this book should nevertheless appeal to the mathematically inclined electrical engineer. A second volume is intended to cover applica-

tions of tensor analysis to relativity, electrodynamics, and electrical machines . . . Considered as a whole, this is a well-planned book which represents a welcome addition to the literature on the subject." *Nathan Marcuvitz.*

Brown, Derek Warburton, & Harris, W. T. Introduction to engineering plastics. 274p. 1947. Rinehart & Co., New York, $4. (Murray Hill books.)

American scientist, Oct. 1947, p.568. ⅓ col.

"Since the discovery of the phenolic resins, scarcely a quarter-century ago, the growth of the plastics industry has been stimulated by the synthesis of many hundreds of new materials now at the disposal of the engineer. The authors . . . have coordinated the available data on these materials and on the methods of handling them, and have presented much valuable information in a comprehensive yet simplified manner. Descriptions of the various thermoplastic and thermosetting materials are included with their chemical and physical properties. Engineering tests and specifications, plant and equipment data, design consideration and commercial tolerance are all considered."

Electronics, Aug. 1947, p.249. 11 l.

"Of particular interest to the electronic engineer are highly readable chapters on x-ray examination of plastics . . . metal coating of plastics by electroplating and by spraying molten metal . . . machining of plastics . . . high frequency heating for processing plastics and welding thermoplastics . . . and welding plastics." *J. M.*

General Electric review, Oct. 1947, p.55. ¼ col.

"Should serve excellently as both a text and reference for the various people in industry who design for, specify, and purchase plastic materials. The authors have avoided the tendency to glamorize plastics as a new industry. They present plastics as a group of materials of increasing importance and stress the consideration of proper application of the proper plastic. The approach has been from the standpoint of the person who wants to use plastics and is interested in specific information as to application, properties, and methods of production of the various plastic materials. The treatment is concise and accurate. Illustrations and tabulations are well chosen. An appendix lists materials, applications, trade names, and manufacturers." *E. G. Gray.*

Bullock, Raymond. Airline piloting. 163p. 1947. Jeppesen & Co., Denver, Colo., $3.50.

Aeronautical engineering review, Oct. 1947, p.63. ⅜ col.

"Not a textbook of the technique and procedures of flying but rather a book that counsels the flier on the rules of conduct essential to his exacting career . . . Prepared especially for air lines, for schools and universities with flying courses, and also for the personal use of those who wish to become good copilots and eventually captains . . . Based on the long experience of an air-line captain who is still flying for Western Airlines . . . The subject is presented in lively prose, which keeps the reader interested in his study."

Buxton, Patrick A. The louse; an account of the lice which infest man, their medical importance and control. Ed.2. 164p. 1947. E. Arnold, London, 10s. 6d.

Journal of the Royal Sanitary Institute, Sept. 1947, p.536. ½ p.

"The 1939-1945 war must inevitably provide much new material for the second edition of Professor Buxton's book, since typhus and other louse-borne diseases so closely connected with war have been studied anew. The book follows its predecessor in the sequence it adopts and the style, characteristic of the author, is wholly readable . . . There is a large bibliography, though papers on toxicity to human beings and animals of some of the insecticides recommended are not included . . . Well printed, with few mistakes, and should be in the possession of anyone, dealing with this unpleasant parasite." *A. W. M. H.*

Carleton, Robert H., & Williams, H. H. Physics for the new age. 656p. 1947. Lippincott, Philadelphia, $2.80.

School science and mathematics, Oct. 1947, p.672. ⅝ p.

"This book of physics presents the practical side as well as the more purely scientific phase of physical principles and generalizations. Some of the outstanding chapters of this text include Weather, Electronic Tubes in Radio, Illumination and Light Control, Air Conditioning and Heating, Refrigeration and Food Processing, and Nuclear Changes and Control . . . Well bound and attractive. A number of my physics students who have examined this text have expressed themselves favorably concerning its general appeal and readability." *Estil B. Van Dorn.*

Carrighar, Sally. One day at Teton marsh. 239p. 1947. Knopf, New York, $3.50.

Natural history, Nov. 1947, p.388. ½ col.

"Follows closely the pattern of . . . *One Day on Beetle Rock,* except that . . . the locale is a beaver pond in the Jackson Hole country of Wyoming instead of a height in the Sierra Nevada Mountains. The day of the equinox has been selected to illustrate the lives of the animals of the book. The principals are an otter, a trout, an osprey, a mosquito, a scud, a mink, a varying hare, an American merganser, a moose, a leech, a leopard frog, a snail, a trumpeter swan, and a beaver. A chapter is devoted to each . . . Miss Carrighar has again proved that she is a keen observer of the too frequently unnoticed ways of the wild creatures, and she has afforded most interesting reading in the same literary style that has already won her great acclaim." *T. D. Carter.*

Chase, Carl Trueblood. Evolution of modern physics. 203p. 1947. Van Nostrand, New York, $2.50.

Power plant engineering, Nov. 1947, p.183. ⅓ col.

"From the first page to the last, this book maintains the fundamental scientific outlook, the motivation that activates basic research by showing the clear steps in logic which lead from the discovery of one fact or principle to another . . . Gives to every reader a broad framework for a full understanding of the present day world of the physical scientist, the history of its past development and its trend into the future . . . Should be of intense interest to all engineers and others interested in scientific development."

Scientific monthly, Sept. 1947, p.253. 2 col.

"Twenty chapters, each an act in a great drama, unfold the story of human knowledge from lodestone and amber days to the contemporary world of neptunium and plutonium, intruding neutrons and splitting atoms, darting photons and spinning electrons, ephemeral positrons and shadowy neutrinos. Each major character in the drama from Thales to Rutherford, and many a minor one, steps upon the stage, addresses his questions to Nature, hears and records her answers, and makes his exit, leaving to successors new knowledge, new concepts, new principles, new speculations, new ways of looking at the same old world . . . A reader who knows the outlines of political and social history and the rudiments of chemistry and physics will follow the book with sustained interest and profit . . . Beautifully illustrated with twelve full-page plates showing phenomena and equipment representative of modern physics." *Thomas D. Cope.*

Chutorash, Gustave. Automobile body engineering and surface development. 74p. 1947. Technical Copy Writers of America, Detroit, $15.

Automobile engineer, Aug. 1947, p.291. 1⅜ col.

"Does not perhaps bear out its full title in that it deals only with one aspect of body engineering, namely, that of surface development, and to justify its title such a book would need to embrace all branches of modern bodybuilding technique. As a textbook on the theory of surface development, an involved and complex subject to the average student, this new publication is a valuable contribution and well repays a close and careful study . . . Attractively printed on good quality paper, the book contains 36 pages of detailed illustrations, mostly on large folding plates, and a similar number of pages containing descriptive matter."

Clarke, Loyal. Manual for process engineering calculations. 438p. 1947. McGraw, New York, $6. (McGraw-Hill chemical engineering series.)

Ceramic age, Oct. 1947, p.228. ⅔ col.

"Provides data for the convenience of engineers who desire methods of fast calculation for the development of industrial processes and installations. Comprehensive explanations include mathematical data, conversion tables, physical and mechanical properties, thermodynamics, piping, hydraulics, combustion, power, pumps, compressors and several other pertinent topics. Numerous charts, equations, and a complete listing of symbols make this book a clear, concise reference."

Food industries, Nov. 1947, p.191. ¼ col.

"Process engineers who are frequently confronted with the job of selecting equipment, should find this book a convenient reference. It provides at least a start on the compilation of a handy set of working data for rapid process calculations."

Petroleum processing, Nov. 1947, p.887. ½ col.

"Written as a convenience for chemical engineers and other technologists who need answers quickly without going to more comprehensive texts or reference books . . . Consists chiefly of working charts, nomographs, tables, and formulas useful in everyday process engineering problems."

Compressed Air and Gas Institute. Compressed air handbook. 400p. The Institute, New York, $3 (Foreign, $3.50).

Concrete, Oct. 1947, p.32. ⅔ col.

"In addition to making available a mass of new and original data not heretofore published in a single volume, the handbook contains in revised and improved form all the standard reference material formerly published as 'Trade Standards.' Included are definitions, test standards, and numerous basic tables and formulas."

Engineering news-record, Nov. 13, 1947, p.152. ½ col.

"A large section . . . is devoted to engineering the compressor plant for maximum efficiency, with detailed suggestions for planning, selecting, installing and operating the machines. Intercoolers, aftercoolers, oilers, and other supplementary equipment are described. Adequate information is supplied on effect of altitude on compressor capacity and tool efficiency. Tables give friction losses in pipes of various sizes at different pressures and air flows. A table gives the number of specific tools that can be operated from various size compressors but the book would be much more valuable to construction men if consumption of individual tools could be included, with some reduction factors for multiple use."

Excavating engineering, Oct. 1947, p.650. ⅓ col.

"Published to meet widespread demands for a reference text on applications, installation, operation, and maintenance of air compressing equipment and air-powered tools of all types . . . Represents the collective knowledge, experience and thought of the 19 member companies of the Compressed Air and Gas Institute, and was compiled over a two-year period as a joint activity of the Institute's educational and technical committees."

Conant, Roger. Reptiles and amphibians of the northeastern states. 40p. 1947. Zoological Society of Philadelphia, Philadelphia, $1.

Pennsylvania science news-letter, Oct. 1947, p.4. ⅓ col.

"Well printed, completely illustrated and well written. Its avowed purpose is to assemble together for the first time all the snakes, lizards, turtles, frogs, toads and salamanders known to occur in the Northeastern States, in order that science teachers, nature enthusiasts and Boy Scouts may readily identify specimens encountered in the field. In addition, it provides valuable information of a non-technical nature for each species . . . Seems likely to be useful even to herpetologists since it presents a complete list of all amphibians and reptiles of the Northeastern States and an excellent illustration of each species."

Conyers, Frank. Cleaning and dyeing proficiency. 192p. 1947. Heywood & Co., Ltd., Drury House, Drury Lane, Russell St., London, W.C.2, 10s. 6d.

Journal of the Society of Dyers and Colourists, Sept. 1947, p.299. ⅝ col.

"The author correctly indicates that this book is not intended to be a text-book. In many ways it forms an excellent guide to a person opening a dry cleaning business and much of the advice given is very sound . . . From a technical standpoint, the book shows lack of balance, e.g. six pages are devoted to the cleaning of flannel trousers, whilst the whole subject of garment dyeing is dismissed in the same space. Some of the author's statements are open to question

. . . Written with a clarity and simplicity of style which make for enjoyable and easy reading. To anyone about to enter the dyeing and cleaning trade, the book has particular value. By studying it, such a person would avoid many pitfalls and save himself a great deal of anxiety and money." *A. Breare.*

Dawes, Ben. Trematoda of British fishes. 364p. 1947. Quaritch, London, 45s.

Science, Aug. 1, 1947, p.112. ⅝ col.

"The author's aim was to describe the trematodes of British fishes more fully than was possible in his book *The Trematoda* . . . but not to presume to treat the subject exhaustively. The author is to be credited with a laborious task well done . . . May be considered as essentially a compilation of information from other sources, supplemented from first-hand experience with many of the species mentioned. Although . . . not a critical reference work on the subject, it will be of considerable value as a handbook and as a guide to the extensive literature on the subject." *L. J. Olivier.*

Demerec, Milislav, ed. Advances in genetics. v.1. 458p. 1947. Academic Press, Inc., 125 E. 23rd St., New York, $7.50.

American scientist, Oct. 1947, p.562, 564. 1 col.

"This first volume in a new series of critical summaries and reviews is planned not only to bring together in one place the more recent advances in genetics, pure and applied, but to correlate the data of borderline fields and to incorporate the conclusions into the whole body of genetic knowledge. The ten articles in this volume are divided equally between plant and animal material . . . The book is well made and bound and contains both author and subject indices. A more extensive subject index would have improved its usefulness as a reference work. The authors, editor, and publisher are to be congratulated on the successful inauguration of this new series." *D. F. Poulson.*

Quarterly review of biology, Sept. 1947, p.217. ⅝ col.

"The appearance of a new periodical among the existing multitude seems to warrant an examination of its aims. The present volume is offered, according to its editor (or editorial board), not, as might be supposed, because genetics advances so rapidly that its ground cannot be covered by reviews in the existing periodicals; it is offered, rather, 'in order that critical summaries of outstanding genetic problems . . . may appear in a single publication,' instead of being scattered among a considerable number of review periodicals. If *Advances in Genetics* can achieve this concentration it will be an undoubted convenience. The experience of series of a more or less similar kind in other fields does not give much cause for optimism on this score, however, and it seems probable that we shall in fact have an extra volume of genetical reviews in addition to those scattered in other periodicals." *Eileen S. Gersh.*

Deming, Horace G. Fundamental chemistry; an elementary textbook for college classes. Ed.2. 745p. 1947. Wiley, New York, $4.

Science, Sept. 19, 1947, p.278. ½ col.

"Teachers who are interested in a presentation of elementary chemistry which encourages thought and the development of a questioning and scientific attitude on the part of the student, teachers who are desirous of a treatment which is not repetitious to the student who has already had some training in chemistry, and students who are concerned with improving their own basic knowledge of chemistry will all welcome this new edition . . . Truly . . . worth-while . . . and may be read with profit by teacher and student alike . . . Logically written in a prose which is easy to follow and understand . . . Orderly in its presentation and accurate in its information . . . Thoroughly modern in its thesis, its approach, and its treatment of theory and fact . . . Designed to present chemistry as a 'manner of thinking' rather than as a 'collection of facts,' and to this end it encourages the student to thought through well-chosen questions, problems, diagrams, and illustrative examples." *Therald Moeller.*

Dickinson, Thomas A. Experimental casting plastics. 30p. 1947. Plastics Research Co., Box 346, Alhambra, Calif., $2.

Modern plastics, Sept. 1947, p.184. 8 l.

"This . . . book is the result of an experimental research program undertaken by the author. It is a report which is devoted to formulae and simple new methods of making rigid or flexible patterns, molds and casts from plastics or for use in connection with plastics. Photographs and drawings illustrate certain portions of the text and numerous bibliographical references are presented for the benefit of those who may wish to undertake additional research work."

Eidinoff, Maxwell Leigh, & Ruchlis, Hyman. Atomics for the millions. 281p. 1947. McGraw, New York, $3.50. (Whittlesey House publication.)

American scientist, Oct. 1947, p.564, 566. ⅔ col. including other reviews.

"Contains a comprehensive account of atomic physics and the release of energy by nuclear fission, set forth in non-technical language . . . Aimed at the readers of the Sunday supplements and stands the best chance of creeping upward into the list of best sellers."

Chemical and engineering news, Nov. 17, 1947, p.3456. 1 col.

"Cartoons and homely analogies are the devices the authors use in preparing a book primarily intended for the intelligent reader who lacks scientific training and background . . . The first half of the book will make excellent reading for a boy or girl whose mind has begun to ask questions about the world in which he lives. The second half is worth the time of anyone who seeks, in clear language and brief space, the technical history of the nuclear energy developments and the how and why of their probable effect on our future." *D. O. Myatt.*

Scientific American, Oct. 1947, p.186. ⅓ col.

"Makes a valiant and successful attempt at bringing into focus the whole subject of atomic energy. Unfortunately, from this reviewer's standpoint, too much emphasis is placed upon the atomic bomb itself, but the text is so extensive—for a book designed for popular consumption—that the bomb does not completely over-power other aspects of atomic potentialities. The authors' handling of the subject is excellent, and their attempts at popularization have not been carried too far. A large number of excellent line drawings—mostly humorous in treatment—serve to balance some of the heavier

parts of the text." *A. P. P.*

Scientific monthly, Nov. 1947, p.438. 1⅛ col.

"Dr. Eidinoff was directly attached to the Manhattan District at Columbia University, at the University of Chicago site, and with the Kellex Company, who built much of the actual equipment. He knows the processes involved and the atomic side of the problem. Hyman Ruchlis is an educator, a science instructor, and has done much work in improving science courses in high schools. The teamwork of these two men is accurate, straightforward presentation of the opening of the atomic age, told in language adapted to both high-school students and the general public . . . The plentiful semi-cartoon illustrations by Maurice Sendak are excellent and extremely helpful in understanding the happenings in nuclear physics." *John W. Campbell.*

Eldridge, John A. College physics. Ed.3, revised. 720p. 1947. Wiley, New York, $4.50.

Review of scientific instruments, Oct. 1947, p.777. ⅝ col.

"Embodies no extensive changes, but the order of presentation of some sections has been shifted as a result of the use of the book in the war training programs. In mechanics, for example, statics rather than hydrostatics now comes first. Some changes have been made in the chapters on electronics and radioactivity and nuclear physics. The author's style is interesting and forceful, and the diagrams are clear . . . There is an excellent appendix on proportion . . . A greater number of worked-out examples is given, but the problems have not been greatly altered." *William W. Watson.*

Fenton, Carroll Lane, & Kambly, P. E. Basic biology for high schools. 726p. 1947. Macmillan, New York, $3.24.

Nature magazine, Nov. 1947, p.497. ¼ col.

"Presenting the fundamental facts, principles, and problems in the science of living things, this new biology provides a modern and stimulating text that can be read with enjoyment as well as provide the high-school student with the means to understand the world in which he lives and how to live wisely in it . . . Presents the essentials of a varied and complex science within the limits of a standard one-year course. The material has been carefully weighed and tried in school work. There is no attempt to make the book both a textbook and a source of supplementary reading, but in their goal of providing a readable text the authors notably succeeded."

Gauger, Alfred W. Physical chemistry and the technology of fuels. 114p. Ray Dickison, Dept. of Chemistry, Pa. State College, State College, Pa., $2.

Petroleum processing, Sept. 1947, p.713. ⅝ col.

"The 21st Annual Priestley Lectures on the *Physical Chemistry and Technology of Fuels* is described by the author as a review of the present state of our knowledge about fuels with particular emphasis on those aspects that are of interest to physical chemists. While it deals primarily with coal the book gets into the interconversion of solid, liquid, and gaseous fuels, gasification of solid and liquid fuels, fuels as chemical raw materials, and the nuclear energy power plant."

Griffiths, Ezer. Methods of measuring temperature. Ed.3, revised and reset. 223p. 1947. C. Griffin, London, 20s. net.

Journal of the Iron and Steel Institute, Oct. 1947, p.319. ⅛ col.

"Concerned with the measurement of temperature, whether in scientific investigations or in the control of industrial operations." *R. E.*

Mechanical world, Sept. 5, 1947, p.251. 1½ col.

"Of the greatest value to those interested in the accurate measurement of temperature, but it requires reading with discrimination because of Dr. Griffith's habit of putting forward all the evidence without guidance as to which to give credence and to the extreme uneveness of the revisions which have been made since the last edition. As the type had to be reset it seems most unfortunate that the opportunity was not taken of rewriting the book entirely as the results are often most confusing, and many of the figures given are based on work which is now of only historical interest; whilst the words 'modern' and 'recently' are made to refer to work carried out about thirty years ago." *J. R. F.*

Halsey, George D. Handbook of personnel management. 402p. 1947. Harper, New York, $6.

American business, Sept. 1947, p.62. ⅝ col.

"The purpose of this book seems to be to show that the personnel manager in a business is responsible for increasing the individual effectiveness of every worker on the payroll. This is a broad and sound concept of the personnel manager's job, and the book thoroughly documents its author's belief that the right sort of broad-gauged personnel work can and will go a long way toward increasing the effectiveness of workers . . . Well put together, with many illustrations of forms and records, and the author's broad experience shows through every paragraph of the book—because every paragraph reads as if it were written out of real experience."

Factory management and maintenance, Oct. 1947, p.270, 272. 12 l.

"Methods tested and found successful in organizations with fewer than 3000 employees are here reported and analyzed. The theory supporting these practices, with examples from a variety of work situations, is considered. The author discusses all phases of employing, orienting, training, and supervising, not only from the point of view of top management, but also in day-to-day operations on section and department levels."

Harding, T. Swann. Two blades of grass; a history of scientific developments in the U. S. Department of Agriculture. 352p. 1947. Univ. of Oklahoma Press, Faculty Exchange, Norman, Okla., $3.50.

Chemical and engineering news, Nov. 3, 1947, p.3246. ⅔ col.

"An outgrowth of a survey of the research publications of the U. S. Department of Agriculture . . . Well written in interesting and popular style . . . Tells in fascinating manner the many important contributions that the department has made to the development of our agricultural industry . . . Begins with the early activities of the Patent Office in the agricultural sciences and traces the development and changes in organization to the present time. The out-

standing scientific contributions made by the various scientists and an estimate of the monetary value to the nation of many of their contributions are presented . . . Serves a very useful purpose in making available to the layman, as well as the scientist, a description of the scientific accomplishments of the department." *H. R. Kraybill.*

Harries, E. H. R., & Mitman, M. Clinical practice in infectious diseases. Ed.3. 679p. 1947. Williams & Wilkins Co., Baltimore, $4.50.

American journal of public health, Nov. 1947, p.1485. ¾ col.

"The authors of this excellent book are medical superintendents of English hospitals who have evidently had extensive clinical experience in the management of the various contagious diseases . . . The description of the maladies and of their complications, prevention, and treatment are concise, accurate, and up-to-date; and there are many helpful diagrams, charts, and tables, but no photographs—colored or otherwise—of the actual conditions. Many of the chapters have bibliographies appended but the titles of the references are not given, thereby losing much of the value of such bibliographies. There are a number of minor matters in which British custom and procedure evidently differ from American . . . On the whole, the book can be very highly recommended, particularly to medical students." *Philip M. Stimson.*

Hawley, Gessner G. Small wonder; the story of colloids. 220p. 1947. Knopf, New York, $3.50.

Food industries, Nov. 1947, p.192. ⅛ col.

"An interesting little volume, aimed at providing a more general understanding of colloids . . . Tells in non-technical language what colloids are and why they act as they do . . . Explains the nature and characteristics of many important foods, as well as such processes as homogenization of milk and the treatment and purification of water. The food plant executive should find it helpful in gaining a better understanding of his technical operations."

Rubber age, Sept. 1947, p.742. ⅛ col.

"Offers the first full-length discussion of a new science in terms the layman can understand . . . A brief simple statement of the fundamental principles, the problems, and the achievements of colloid science to date. The author explains the nature and characteristics of many important plastics, foods, glue, soap, etc., of many vital bodily structures and functions, and of such industrial processes as the treatment and purification of water and sewage, the processing of crude oil, and the homogenization of milk. A book of this nature must invariably refer to rubber and latex, and comments on these materials are scattered throughout the pages. What colloids are and why they behave as they do is described in non-technical language."

Hendry, John W. Manual of time and motion study. Ed.2. 215p. 1947. Pitman, London, 12s. 6d. net.

Mechanical world, Oct. 10, 1947, p.378. ⅝ col.

"Well written and clearly describes the intricacies of the subject. Particularly stressed is the need for a means of accurately measuring human endeavour in industry and the development of productive efficiency, which can be carried out only by the correct application of time and motion study . . . The most noteworthy chapter . . . is number eight, which gives an excellent outline of the selection and training in time study personnel. This aspect is covered more thoroughly than in any previous publication. Mr. Hendry must be congratulated on the issue of this second edition; it is hoped that the demand for this book continues." *S. B. D.*

Holmstrom, J. Edwin. Records and research in engineering and industrial science. Ed.2, revised and enlarged. 366p. 1947. Chapman & H., London, 21s. net.

Discovery, Oct. 1947, p.318. ⅔ col.

"Dr. Holmstrom has gathered together in his pages a wealth of bibliographical and documentary information which is inaccessible if not unobtainable in other ways. An enthusiast in the field of gathering, classifying and collating engineering information he infuses all his readers with some of that same spirit and makes the most hard-headed of practical men realise the great utility and worth of this sometimes despised branch of systematic science. At the same time theoretical and practical, general and detailed, he deals with all those points which are too often neglected in the applied scientist's training; how, where and when to get information and what to do to use it in the best possible manner." *E. D. Hart.*

Transactions of the Institute of Marine Engineers, Sept. 1947, p.165. ¼ col.

"The aim of this book is to teach the remarkable and stimulating fact that the whole of knowledge, except what is purposely kept secret, is available for everyone to use . . . The opportunity has been taken to carry out a fairly extensive revision which has lengthened the book by an aggregate of 64 pages of more recent references, in the hope that it will be useful for the period of post-war reconstruction. The sections relating to International, Imperial and Foreign Organisations for research have been expanded to form a short separate chapter which later it may be possible to amplify further."

Hougen, O. A., & Watson, K. M. Chemical process principles. pt.3: Kinetics and catalysis. 348p. 1947. Wiley, New York, $4.50.

Mines magazine, Oct. 1947, p.35. ⅖ col.

"The Professors of Chemical Engineering at the University of Wisconsin show ways of solving industrial chemical problems through the applications of the principles of physical chemistry. This is a step away from the trial-and-error approach which usually characterizes solving the same problems by means of pilot plants . . . Contains tables, an appendix, author and subject index, and practical problems on chemical and physiochemical processes collected into groups at the end of each chapter . . . Throughout . . . economic considerations are emphasized. There is a helpful discussion of optimum operating conditions and many useful ideas are presented on the interpretation of pilot plant data."

Hughes, Thomas P. Metals and plastics; production and processing. 373p. 1947. Irwin, Chicago, $4.50. (Irwin-Farnham mechanical engineering series.)

Chemical and engineering news, Nov. 10, 1947, p.3320. ⅛ col.

"The underlying purpose of this volume is stated by the author to be presentation of a comprehensive perspective of manufacturing processes with a detailed study of some of the more common metals, alloys, and plastics so that the student will have an understanding of their fundamental properties and a basis for selection . . . A glossary of terms is furnished in the appendix, as are tables to supplement the text."

Journal of the Institute of Metals, Oct. 1947, *metallurgical abstracts,* p.95. ¼ p.

"A well produced and well illustrated volume written for engineering students, with the professed aim of giving them a knowledge of the characteristics of the raw materials—metals and plastics—which they will need to use in the practice of their vocation. In its title and aim the book is, however, more ambitious than in its achievement. Essentially, the author has followed the pattern of many conventional elementary text books on 'metallurgy for engineers' and has included, almost as an afterthought, just 20 pages on plastics. It would be pleasing to be able to report that the volume is a well balanced, freshly written account of ferrous and non-ferrous process and physical metallurgy; but in fact the matter is, in general, poorly selected, and the treatment is dull, often slipshod, and sometimes obscure and misleading . . . The best parts . . . are those dealing with mechanical work and welding; these include some good photographs of modern equipment." *J. C. Chaston.*

Mechanical engineering, Nov. 1947, p.953. ⅝ col.

"Contains information not only on the older sciences of chemical metallurgy and process metallurgy, but also on the more modern phases of metallurgy and of plastics technology. While . . . written for college students, it may be even more useful for mechanical engineers whose university training was built around the so-called fundamentals, around machine design, thermodynamics, power plants, and social relations. To such men the words spheroidizing, austempering, bainite, S-curves, grain size No. 5, submerged arc welding, ureaformaldehyde, and so on, mean nothing. They will profit by studying the book and by attempting to answer the questions which follow each chapter. Being an elementary textbook it treats each subject rather briefly. For those who wish to go into any one of the subjects more thoroughly, a very complete bibliography is given at the end of each chapter. The glossaries on metallurgical and foundry terms will be helpful to many mechanical engineers." *W. Trinks.*

Steel processing, Oct. 1947, p.644. ⅝ col.

"Primarily written as a text for undergraduate engineering students and as such is an excellent summary of materials and processes in the ferrous and nonferrous industries. Plastics are confined to one chapter, but the mechanical and physical properties of the ferrous materials are authoritatively and thoroughly discussed. A glossary of terms used are furnished in the appendix as well as tables to supplement the textual material throughout the book."

Hunter, George, & Whitman, Walter. Doorways to science. 546p. 1947. American Bk., New York, $2.40.

American scientist, Oct. 1947, p.584. 9 l.

"A perfect example of the newer type of textbook for young people of high-school age is found in this book. Many fine photographs and graphs add to its attractive appearance. Written simply, with an adequate amount of easy experiments and exercises, it gives young people some of the fundamental concepts of science."

Husa, William J. Pharmaceutical dispensing; a textbook for students of pharmaceutical compounding and dispensing and a reference book for pharmacists. Ed.3, revised. 834p. 1947. Husa Bros., Iowa City, Iowa, $6.

Drug topics, Oct. 13, 1947, p.32. ⅛ col.

"Primarily a textbook, [this book] deserves a place in the pharmacist's reference library. One is easily impressed by the wealth of research and effort to make the volume up-to-date. Profusely illustrated, it deals with all phases of prescription work and important new developments in pharmaceutical dispensing . . . Also designed to help the retail pharmacist in meeting the problems of the dispensing practice and is admirably suited to this end. The chapters on the incompatibilities of inorganic and organic compounds are done extremely well . . . A worth while contribution to pharmaceutical literature."

Johnson, William H., & Newkirk, L. V. Home mechanics. 302p. 1947. Macmillan, New York, $3.20.

Forecast, Nov. 1947, p.58. ⅘ col.

"The particular home mechanics jobs incorporated into the text were selected because of frequent occurrence in daily living, experience has proved that they can be taught effectively in a home mechanics class, and the jobs hold the students' interests. The five instructional units offered cover the subjects of electricity in the home, the care and repair of home utensils and appliances, plumbing and heating, windows and doors, and home and garden. The units include consumer information, instruction for care and adjustment of home appliances, and related equipment and craft projects. The home-making teacher will like the step-by-step instructions which are profusely illustrated."

Karrer, Paul. Organic chemistry; translated by A. J. Mee. English ed.3, revised and enlarged. 957p. 1947. Elsevier, New York, 38s. net.

Chemistry & industry, Oct. 4, 1947, p.614. ⅔ col.

"In these pages there is undoubtedly a real wealth of knowledge, even to a discussion of the organic compounds of the isotopes of hydrogen and oxygen . . . Divided into four main classifications: Aliphatic compounds, Carbocyclic compounds, Heterocyclic compounds, and the Compounds of heavy hydrogen and oxygen. There are also twenty-four tables of useful items, together with a chronological survey of important historical dates . . . Should be on every College library shelf, and those students who can afford to purchase this fine work will be amply rewarded in having knowledge available which would otherwise entail wide reading. Those who do like reading original papers, however, will find references lacking. The translator is also to be congratulated on his very readable version, which must have entailed unlimited time and effort." *B. Crowhurst.*

Nature, Oct. 11, 1947, p.484. 1⅓ col.

"The appearance of the book is superb . . . The translating and editing have been ade-

quately done . . . The author's statement that 'every chapter has been the subject of careful scrutiny and revision' is no idle claim . . . No pains have been spared to include the notable advances until the end of 1945. These are inserted in the text, and the reader may rest assured that the book is thoroughly up to date . . . All the good things said about the first edition may confidently be said again. No one can fail to admire the orderly presentation, the lucid description of preparative methods, the emphasis on rigid determination of structure, the inclusion of many topics of biochemical interest, and the useful tables in the appendix. A notable improvement is the increased number of references to standard books and monographs (some of which are American, and a few British). The amount of information contained . . . is tremendous . . . Will appeal to research workers and others who seek authoritative information on organic chemistry. Our thanks go to the author for giving us . . . this comprehensive, up-to-date survey of organic chemistry." *Neil Campbell.*

Kieran, John. Footnotes on nature. 279p. 1947. Doubleday, New York, $3.

Natural history, Nov. 1947, p.390. ⅝ col.

"Has three appealing elements: it is a record of a lifetime of enthusiastic observation of nature, an account of human companionship, and a reflection of the author's sensitive response to poetry. These three qualities are so happily blended that the book takes on a dimensional quality not shared by all nature studies. And there is more than a dash of the Kieran humor . . . For those of us who are not specialists in nature, Mr. Kieran's approach is most welcome. He writes not as the fully-stored authority speaking out of omniscience but as the eager learner who wishes to share his delights with us. Nor does he attempt too much. He gladly leaves some fields comparatively untouched . . . Aptly illustrated with 20 excellent wood engravings by Nora S. Unwin." *Forrest Izard.*

Scientific American, Dec. 1947, p.280. ¼ col.

"Those who like to endure all sorts of weather in order to enjoy the birds, the plants, the insects, and other wild life will find this book thrillingly informative. Those who do not like such things will find themselves wondering how a brilliant mind like John Kieran could become so insipid. And those who have the temperament for this sort of hobby but never have tried it will find John Kieran plunging them head first into a life time of enjoyment. John Kieran, as almost everybody knows, is a past master at using words to make scenes come alive, and the wood engravings by Nora S. Unwin are excellent." *E. L. C.*

Knaggs, Nelson S. Adventures in man's first plastic; the romance of natural waxes. 329p. 1947. Reinhold, New York, $6.75.

Journal of chemical education, Oct. 1947, p.519. ½ col.

"A book about an industrial material that the botanist, the entomologist, archaeologist, geologist, chemist, metallurgist, and air-chair traveler will find delightful reading. It is difficult to realize that it is a book primarily about plastics, so skillfully has Nelson Knaggs, chemist, author, and photographer, captured the excitement of adventure connected with man's search for the world's wax-bearing botanicals . . . For the technical reader there is a technical reference section and an excellent bibliography on vegetable waxes, insect waxes, animal waxes, and mineral waxes, together with a general bibliography and a book list revealing the historical background of waxes." *Greta Oppe.*

Products finishing, Nov. 1947, p.128. ¾ col.

"The story of the search for the world's natural waxes—a romance with all the adventure and excitement of a novel but at the same time factual and informative. The reader is immediately launched on a dangerous expedition into the forbidding jungles of the Amazon Basin, where he follows the author through a series of adventures in his search for new wax-bearing plants . . . Moreover, he is taken to the far corners of the earth where natural waxes are collected today."

Scientific monthly, Nov. 1947, p.440. 1¼ col.

"Besides accounts of beeswax and other insect waxes, there are stories of those obtained from the leaves of plants, from sperm whales, and from petroleum, lignite, and other deposits found in various parts of the world . . . includes the fascinating history of ancient and modern man's search for these products, their extraction and processing, as well as the many uses made of waxes from the late Stone Age to the present time. An intimate picture is presented of various regions, the inhabitants, their beliefs, character, and their industries . . . Very informative . . . and . . . written in a style that may be enjoyed by everyone." *George S. Jamieson.*

Knight, Charles R. Animal anatomy & psychology for the artist and layman. 149p. 1947. McGraw, New York, $5. (Whittlesey House publication.)

Frontiers, Dec. 1947, p.64. ½ col.

"This forbidding and technical sounding title is the name of a book which will delight all kinds of people interested in the construction of animals and their personalities . . . There is just the right amount of information about each type of animals and the book covers an adequate number of the forms of animal life . . . So delightfully written that the layman will find much that will interest and instruct him . . . The experience of years has been condensed into this comparatively small book, which is well worth a place in any naturalist's or artist's library." *Harold T. Green.*

Natural history, Oct. 1947, p.340. ⅝ col.

"The effluence of a man who is competent both as artist and naturalist . . . Written simply and colorfully, and it shines with the spirit of one who accepts his calling with deep seriousness. Text and illustration are practically interwoven, although here and there we find some lapses for which the editor should be held responsible . . . The author deals successively with a wide variety of mammals, including infantile examples. He deals with facial expression in relation to mood and with the structure of birds, reptiles, fishes, and invertebrates. He emphasizes how difficult it is for the draftsman to see what he needs to recognize without first mastering a knowledge of fundamental anatomy. He stresses the importance of studying the planes produced by overlying muscles and integument and the extremely complicated and subtle patterns due to tracts of hair, feathers, scales, etc. . . The depiction of skeletons in true action and the plate showing how various kinds of animals lie down will be worth

the price of the book to many an artist." *R. C. M.*

Kolthoff, I. M., & Stenger, V. A. Volumetric analysis. Ed.2, revised. v.2: Titration methods. 374p. 1947. Interscience Publishers, New York, $6.

Chemist, Oct. 1947, p.438. 1 col.

"Volume II . . . contains all of the material of the previous edition with considerable additions and modifications. However, the oxidation-reduction titration, which formed a part of Volume II in the prior edition, is now reserved for a third volume . . . As stated in the preface, the authors did not intend to cover all applications of volumetric methods exhaustively but rather limited themselves to a selection of useful and reliable procedures of general interest. Notwithstanding this, it seems to this reviewer that the book should prove extremely helpful to anyone who has occasion to use volumetric procedures and as such, should be a useful addition to the chemical library. Two tables of atomic and equivalent weights, together with 'rational' values based on the work of Schoorl are included." *William H. Van Delden.*

Sugar, Oct. 1947, p.53. ¼ col.

"Offered as a comprehensive, modern text presenting critically selected methods for the volumetric determination of various organic and inorganic substances . . . Deals with the fundamentals of the art which underlie all analytical operations that involve the use of burettes, pipettes, measuring flasks and standard solutions."

Krumbhaar, William. Coating and ink resins; a technological study. 318p. 1947. Reinhold, New York, $7.

Rubber age, Sept. 1947, p.742. ⅛ col.

"The scope . . . is limited to those types of coating and ink resins which are now in common use. No reference is made to elementary chemistry, chemical equations or elaborate structural formulae, but the theoretical background of the chemistry and physics of the resinous materials is supplied, as far as such conceptions can be supported by experimental evidence. The text is confined to the light colored, hard, soluble and high viscosity groups of phenolic, maleic, and copal type of synthetics, all of which show interesting chemical reactivities when incorporated into surface coatings and printing inks."

Lane, Ferdinand C. The mysterious sea. 345p. 1947. Doubleday, New York, $3.

***Natural history,* Oct. 1947, p.342.** ¾ col.

"[The author] first deals with various theories regarding the origin of the sea and the evolution of its salty waters. He describes the great extent and configuration of the oceanic basins and the methods that oceanographers have used to determine their depth and bottom contours. The nature and composition of oceanic water, the currents, the tides, and the form, power, and nature of the various types of waves are explained and analyzed succinctly and vividly. Dr. Lane then turns his attention to the life of the sea . . . He then emphasizes the importance of the sea to mankind throughout the ages, and discusses man's various inventions for fishing and utilizing the other products of the ocean." *Roy Waldo Miner.*

Lips, Julius E. Origin of things. 496p. 1947. Wyn, New York, $5.

Scientific monthly, Nov. 1947, p.437. 1 col.

"Lest we become overweening in our pride in the achievements of our age, Dr. Lips gives us impressive anthropological proof of the inventiveness of primitive peoples in all parts of the world. Nearly everything we value now seems to have been known in some form in earlier times . . . Fact leaps upon fact in this well-ordered volume, and is enlivened by occasional philosophical comment on the culture under discussion. Whether it be cosmetics and body adornment, hunting, agriculture, architecture, history of the drama, medicine, or religion, it is told in vividly detailed style. Dr. Lips writes entertainingly but keeps his science ever in sight. To add additional clarity there are some fairly good photographs and more than 300 often small, but definitely superb, drawings by Mrs. Lips. The book is enriched too by brief anecdotes of the manners and customs of aborigines . . . There is an extensive bibliography and an index." *Marjorie B. Snyder.*

Longhurst, Grace M. Tuberculosis nursing. Ed.2. 358p. 1947. Davis, Philadelphia, $3.50.

American journal of public health, Nov. 1947, p.1484. 1 col.

"This second edition of *Tuberculosis Nursing*—which has become a valuable nursing library item—has several new chapters as well as many timely revisions. One chapter titled 'Patient Education' is especially helpful . . . The chapters of Case Histories also suggest methods of approach to particular problems which are found repeatedly among tuberculous patients. The detail of 'Method of handling the patient and his problem' could have been made more meaningful . . . In view of the fact that Miss Longhurst feels that nurses should be able to explain the 'How, Why and When' of the disease, it seems unfortunate that clinical tuberculosis is not dealt with more fully . . . The recommended readings and questions suggested for review at the end of each chapter are comprehensive and should be useful to the teacher or student of tuberculosis nursing." *Aline LeMat.*

Lund, John V. Newspaper advertising. 459p. 1947. Prentice-Hall, New York, $5.65.

Editor & publisher, Oct. 25, 1947, p.56. 1⅛ col.

"There is no empty theory in this book. The author discusses the indispensability of complete and realistic analyses of a newspaper's market by explaining why such analysis is the practical and modern way to sell space, and by showing precisely how newspapers go about getting such information and interpreting it. Published sources of information are listed. Explained also are the least expensive ways to gather data each newspaper must find for itself, as well as tips on how to get unpublished census data at cost."

MacDonald, Malcolm. Birds of Brewery creek. 334p. 1947. Oxford, New York, $5.

Audubon magazine, Nov.-Dec. 1947, p.371. 11 l.

"If you wish to do a bit of fireside birding some winter evening, here is your chance. Your guide is a prominent British statesman, son of the late Prime Minister. The environs of Ottawa, Canada, where Mr. MacDonald recently served as High Commissioner for the United Kingdom, are the locale. The account carries one through a full calendar year with the birds, and

the author reveals himself to be a skilled amateur with both an observing eye and a mind well stocked with ornithological knowledge."

Natural history, Nov. 1947, p.430. ⅝ col.

"Avowedly written for the amateur or inexperienced bird lover. The style is informal and sometimes enlivened by verse or humor. The author has supplemented his own findings with information gleaned from such standard authorities as Audubon, Forbush, Taverner, and Bent. The more experienced student will find some observations of significance . . . Excellently printed and bound . . . Illustrated with 23 full-page photographs by Arthur A. Allen and W. V. Critch, seven of them in color . . . May be recommended to anyone seeking a pleasant introduction to many of the commoner birds of the northeast." *D. Amadon.*

Mallory, Virgil S. New trigonometry, including the elements of spherical trigonometry. 264p. 1947. Sanborn, Chicago.

School science and mathematics, Oct. 1947, p.675. ⅝ p.

"A high school textbook . . . The author has given good explanations of the various topics and has made a serious attempt to show the connection which exists between them. By his exercises and problems he had developed a text which, in the opinion of your reviewer, should catch and hold the interest of the student . . . Illustrations although not numerous are appropriate and help to explain the text and there are several historical notes which should add to the appreciation of the subject . . . Should be well liked by those who study trigonometry." *Albert R. Mahn.*

Markley, Klare S. Fatty acids; their chemistry and physical properties. 668p. 1947. Interscience Publishers, New York, $10.

Food industries, Sept. 1947, p.191. ⅖ col.

"Devoted solely to bringing together the widely scattered knowledge of fatty acids themselves. Facts and data on the chemical reactions and physical properties of the fatty acids are presented. The attributes of the long chain fatty acids are discussed at length, while the lower members of the fatty acid series, glyceride esters and natural fats, are given limited attention."

Journal of physical and colloid chemistry, Nov. 1947, p.1450. ½ p.

"The reviewer thinks that the book suffers because of the obvious attempt at inclusiveness. Even very elementary organic chemistry of the acids is considered, and it would probably have made a more readable book if the writing had been directed toward the specialist who, presumably, already has a thorough knowledge of elementary organic chemistry. This tendency to go back to 'first things' gets the author into difficulties once in a while . . . These are, however, minor criticisms and on the whole the book is well written. What is more, it is the only book of its kind published hitherto, and as such it will be of great value as a reference. There are good subject and author indexes." *Lee Irvin Smith.*

Journal of the American Oil Chemists' Society, Sept. 1947, p.24. ¾ col. including an illustration.

"Dr. Markley's writing is lucid and easily readable. His expositions are neither overly elementary nor excessively technical. The book will therefore prove of considerable value to others than those well versed in chemistry. The section dealing with physical properties seems to the reviewer to be particularly good. Despite the general excellence of the work it has some shortcomings . . . There are a few statements which are incorrect or questionable, and there are some other lesser errors. These faults are relatively superficial, however . . . A valuable addition to chemical literature and should be included in libraries serving chemists generally as well as those who specialize in fats and oils." *R. J. Vander Wal.*

Maxted, E. B. Modern advances in inorganic chemistry. 296p. 1947. Oxford Univ. Press, London, 20s.

Chemical age, Sept. 6, 1947, p.336. 1⅖ col.

"Puts before us a selection of topics from the field of inorganic chemistry . . . A work which is commendably up-to-date, especially when one bears in mind the rapid and comparatively recent advances in some of the branches with which it deals . . . Very readable, and the publishers continue to uphold their reputation for the production of books of good value and great worth."

Meacock, F. T. Elements of aircraft propeller design. 96p. 1947. F. & F. N. Spon, London, 12s. 6d.

Aeronautical engineering review, Sept. 1947, p.69. ⅛ col.

"The author's purpose is to present a brief introduction to propeller design in general terms and to indicate the main trends in development with their underlying reasons . . . Over 80 excellent photographs and diagrams illustrating the text are presented in a separate section . . . Can be recommended as a good introductory work requiring only an elementary knowledge of aerodynamics."

Journal of the Royal Aeronautical Society, Oct. 1947, p.865. ½ p.

"Mr. Meacock need not be afraid his book will not sell because its subject is obsolete or even obsolescent. It will not only sell because its subject is one so vital to aircraft performance, but also because Mr. Meacock's own performance in writing the book is first-rate . . . Intended to give a general survey of propeller design . . . Can be thoroughly recommended and the publishers are to be congratulated that, in the difficult conditions at present prevailing, they have put up such an excellent printing performance."

Meyer, Esther. See Novak, Milan, & Meyer, Esther, ed.

Miskella, William J. Infra-red in industry. 64p. 1947. Miskella Infra-Red Co., Cleveland, $2.

Rayon textile monthly, Sept. 1947, p.141. 9 l.

"Primarily a handbook for power and other engineers, executives and all in industry who desire the facts about various kinds of baking ovens for paints, textiles, chemicals, plastics, adhesives, etc. . . Written especially for the user, producer and salesman . . . Valuable for anyone requiring a concise view of the subject in a nutshell."

Muller, H. J., and others. Genetics, medicine, and man. 158p. 1947. Cornell Univ. Press, Ithaca, N. Y., $2.25.

Journal of the American Medical Association, Aug. 30, 1947, p.1575. ⅝ col.

"Contains the text of the six Messenger lectures delivered at Cornell University in the autumn of 1945. Dr. Muller, Nobel laureate in medicine, presents in masterful fashion the elementary principles of modern genetics. With the use of clear and simple diagrams he follows through the several steps of mitosis and meiosis. He considers such problems as the role [sic] of genes and environment in differentiation, gene duplication and gene mutation, both natural and induced."

Nature, Nov. 1, 1947, p.590. ⅘ col.

"As was to be expected, Prof. Muller presents a most attractive account of genetical fact and theory, simple yet meticulously accurate in statement, clothed with pretty notions and bedecked with stimulating ideas . . . Dr. Little is another example of the relative importance of the apostle in the attraction of interest and attention to the science which he represents . . . Prof. Snyder is a recognized leader in the field of medical genetics . . . There is none better qualified than he to show the place of genetics in medicine, its importance in the search for etiological factors and its limitations. In this brief narrative he easily succeeds in displaying the role [sic] of the gene in the causation of human defect and derangement . . . Can be strongly recommended to practitioners of medicine and to men of science other than biological; in fact, to all who seek an easy yet strictly accurate account of what genetics has become and of what it can promise in application." *F. A. E. Crew.*

Quarterly review of biology, Sept. 1947, p.219. 1 col.

"These six lectures to a general audience, given at Cornell University in the fall of 1945, present the relation of heredity to medical and social problems, as three noted geneticists of our time see it. Although united by a common theme, the speakers differ markedly in their general approach . . . As a whole, the book will hold less interest for geneticists than for other biologists, since it is a summation and clarification of genetic thought rather than a detailed exposition of medical or theoretical genetics. The expression and organization of thought in the book will be stimulating to all. Its chief function will have been served if it leads to a deepening understanding among non-geneticists of what genetics has to contribute to the biological view of man." *Bentley Glass.*

Nauth, Raymond. Chemistry and technology of plastics. 522p. 1947. Reinhold, New York, $9.50.

Product engineering, Oct. 1947, p.167. 8 l.

"Useful to engineers seeking background information in the field of plastics. History, properties and applications of thermoplastic and thermosetting resins as well as synthetic rubber, natural resins and plywood, are described. Mold design, presses, and related equipment, are also covered."

Rubber age, Aug. 1947, p.612. ⅓ col.

"Although there are several excellent books available covering the chemistry and technology of plastics . . . the book under review is a welcome addition to the technical literature. It is clear, concise and yet comprehensive. The author has left no stone unturned to acquaint his readers with all types of plastics, their properties, their characteristics and their applications. Liberal use is made of photographs and charts throughout the book and, in most cases, a list of reading references appears at the end of the various sections."

Neuschutz, Louise. 5,000,000 casualties on the home front; a handbook of home safety. 184p. 1947. Beechhurt Press, Inc., 116 E. 19th St., New York, $3.50.

Health news, Sept. 29, 1947, p.165. ½ col.

"Through thirteen dramatic chapters, the author drives home the message of accident prevention. Addressed chiefly to the homemaker, the book is useful also to the public health nurse, physician, and to other welfare workers who enter the home to guide and instruct the family. Teachers also will find it helpful." *Ethel M. Hendriksen.*

Nimmo, R. R. Atomic energy. 201p. 1947. Pilot Press, London, 9s. 6d. (Frontiers of science series.)

American scientist, Oct. 1947, p.564, 566. ⅔ col. including other reviews.

"Contains a comprehensive account of atomic physics and the release of energy by nuclear fission, set forth in non-technical language . . . Contains some information that even the trained physicist will be glad to learn."

Journal of scientific instruments, Sept. 1947, p.251. ⅛ col.

"An attempt is made to describe the developments in physics which first caused scientists to believe that a vast amount of energy is locked up in atoms and which eventually led to its release. The account given in subsequent pages describes the growth of knowledge of atomic structure and attempts to provide a background of knowledge to enable the reader to obtain a clear picture of the circumstances in which energy is obtained from atoms . . . Intended primarily for those with some scientific knowledge; even if this knowledge is not extensive, or indeed very modern, it should suffice to make the book comprehensible. No detailed knowledge of atomic structure is assumed."

Novak, Milan, & Meyer, Esther, ed. Bacteriology; laboratory directions for pharmacy students. Ed.2. 248p. 1947. Mosby, St. Louis, $2.75.

Journal of the American Pharmaceutical Association, scientific edition, Oct. 1947, p.320. ⅛ col.

"This outline was designed to present a systematic introduction of laboratory procedures to be used by beginning students in the study of bacteriology . . . Presents detailed instructions of techniques to be followed throughout an entire laboratory course in bacteriology . . . In general, the outline is a complete one and should prove to be a valuable aid to the teaching of laboratory bacteriology, not only to pharmacy students, but to medical students as well. A novel feature . . . is the modern loose-leaf plastic binding which permits removal or reinsertion of pages when necessary." *C. A. Lawrence.*

Ollard, E. A., & Smith, E. B. Handbook of industrial electroplating. 308p. 1947. Louis Cassier Co., Ltd., Dorset House, Stamford St., London, S.E.1, 15s. net.

Iron age, Nov. 6, 1947, p.90. 10 l.

"Collation of industrial electroplating information for the benefit of those interested in the design, construction, operation and maintenance of electrodeposition plants, and also for those laboratory workers concerned with the testing

and maintenance of plating solutions. The text is solely concerned with the practical aspects of installing and maintaining electrodeposition units."

Iron and steel, Oct. 1947, p.480. ¼ col.

"An endeavour has been made here to collect as much information as possible about the electroplating industry under one cover. No attempt has been made to write a textbook and the treatment is kept as practical as possible. An extensive use has been made of the current literature and as far as is reasonably possible only those items which seem reliable have been chosen."

Metal industry, Oct. 24, 1947, p.344. ⅘ col.

"The authors are to be commended on preparing a concise and practical handbook . . . The authors . . . devote the first hundred pages . . . to detailed information on the plant, services and equipment which are in normal use. So far as the writer is aware the subject matter of this section has never previously been so completely collected and ably presented. In so controversial a subject as electrodeposition it would be impossible for any list of solutions to be universally accepted, but the recommended formulæ given in the next section . . . appear eminently workable for most purposes . . . There are inevitably some omissions . . . There follows a clearly written series of analytical methods including electrometric processes and physical determinations. Deposit identification and testing are also comprehensively dealt with, and the handbook concludes with an invaluable glossary and a number of useful reference tables . . . The authors have compiled from trade and technical literature and from very wide experience a handbook which anyone in any way interested in plating should possess." *A. W. W.*

Welding, Oct. 1947, p.479. ⅓ col.

"Intended for men whose responsibility it is to design, erect, maintain or operate electrodeposition plants, and also for laboratory workers concerned with the testing and maintenance of plating solutions. The work will, thus be of really practical value to responsible people in this section of industry. It must, however, be appreciated that the volume is not a textbook. All theory has been omitted and the authors have confined their work to the practical part of installation and maintenance of electro-deposition plant."

Olliver, Charles W. The intelligent use of the microscope. 182p. 1947. Chapman & H., London, 12s. 6d.

Instrument practice, Sept. 1947, p.436. 1 col.

"The object of the book is to provide a work which may prove useful to all users of the microscope, both beginners and experts . . . Written with skill and knowledge of the subject. The line diagrams and photographs are well reproduced and are numerous . . . Can be unreservedly recommended to all users of the microscope."

Percival, G. H., and others. Atlas of histopathology of the skin. 494p. 1947. Livingstone, Edinburgh, 75s. net.

Nature, Oct. 25, 1947, p.553. ⅓ col.

"Intended to be a companion to textbooks of dermatology and a guide-reference for dermatologists and pathologists. In these aims the authors have been most successful. Special praise is due to Mr. T. C. Dodds, the technician and photographer, and to the printers for the excellence of this publication . . . Will be welcomed by everyone in the field of dermatology and may stimulate the laggards in this neglected field of investigation."

Peters, John P., & Van Slyke, D. D. Quantitative clinical chemistry; interpretations. Ed.2. v.1. 1041p. 1946. Williams & Wilkins Co., Baltimore, $7.

Science, Nov. 7, 1947, p.454. ½ col.

"The authors have done an excellent job of reviewing the enormous literature (4,600 references) and presenting the pertinent facts in logical order. Furthermore, the style is such that the experimental data covering the important observations are connected to make easy and stimulating reading. The material has been presented critically on the basis of the authors' intimate and expert knowledge of the field. If the reader should disagree with interpretations or desire fuller information, the unusually complete bibliography will enable him to consult the original papers. The text is unusually free from typographical and other errors . . . Should be available to all students and teachers of biochemistry and is an essential reference book for clinical chemists and up-to-date internists and pediatricians." *Victor C. Myers.*

Peterson, Thurman S. College algebra. 334p. 1947. Harper, New York, $2.50.

School science and mathematics, Oct. 1947, p.676. ½ p.

"Covers in manner and content what might be called traditional college algebra, with some additional material on applied topics. The scope of this material is illustrated by a chapter of fifteen pages on statistical methods and one of thirteen pages on interest and annuities. In the opinion of the reviewer the attempt to cover such material has resulted in a treatment entirely too brief to be of great service. The author is to be commended for his rigorous treatment of definitions. Restrictions are clearly stated." *Cecil B. Read.*

Pirsson, Louis V. Rocks and rock minerals. Ed.3, revised by Adolph Knopf. 349p. 1947. Wiley, New York, $4.

Canadian mining journal, Oct. 1947, p.747. ⅘ col.

"In precise, clear and simple language, Professor Adolph Knopf . . . has prepared a third edition of the well known and cherished text originally written by the late Louis V. Pirsson . . . Professor Knopf has gone a long way in summarizing and presenting a great deal of . . . accumulated knowledge in concise and precise terms and in a form in which it can be readily applied by any person of ordinary intelligence and a basic education."

Mines magazine, Oct. 1947, p.35. ⅝ col.

"Consists of three parts and an index: Part I: Introductory and General; Part II: Rock Minerals; and Part III: Rocks. The short introductory and general part includes definitions, hints on how to study rocks without the use of a microscope, and a brief summary of facts known about the earth's crust and its component minerals. Part II . . . could be considered to be a treatise on practical megascopic petrography of the principal rock making minerals . . . Part III . . . is the major portion of the book and contains the bulk of the illustrations. The object of this part is to treat rocks entirely megascopically . . . This edition . . . contains many helpful ideas on the controversial subject of megascopic versus microscopic approach to the study of minerals and rocks."

Priest, C. W. Power station efficiency. 119p. 1947. Pitman, London, 10s. 6d. net.

Electrical times, Oct. 9, 1947, p.419. ⅓ col.

"Mr. Priest has . . . in this work, produced an excellent treatise on the whole subject of efficiency as applied generally to power stations. He does not go deeply into the mathematical theory of such conceptions as entropy and enthalpy . . . Particularly useful is the number of typical figures quoted in the examples, and the simple and easily understood presentation of the information given."

Mechanical world, Oct. 10, 1947, p.378. ¾ col.

"The author, who has had 20 years' experience in generation of electrical power, has succeeded in producing a book which should be of great interest and use to all engineers engaged on operation and maintenance of power station plant, whether mechanical or electrical . . . Written in a way which is easily understandable by the practical man and the student, as well as the technical engineer; and includes simple definitions of terms used, together with many useful charts. This publication is by no means a technical text book and does not tell the operator exactly how to improve the efficiency, although it gives useful indications and possible values for comparison. The list of references given at the end . . . will be of use to those who wish to study the subject in greater detail." *J. L. W.*

Transactions of the Institute of Marine Engineers, Oct. 1947, p.187. 11 l.

"We have, for the first time to our knowledge, a complete assembly of all essential information required for a full analysis of power station thermal efficiency. The information is presented without needless mathematical embellishment but is nevertheless quite complete. The manner in which the efficiency of ancillary equipment reflects an overall station efficiency is presented in a commendable form, and the various methods outlined for evaluating losses are most practicable . . . A book which could advantageously find a place in the collection of every engineer interested in efficient power plant."

Ranson, Stephen Walter. Anatomy of the nervous system; its development and function. Ed.8, revised by Sam Lillard Clark. 532p. 1947. Saunders, Philadelphia, $6.50.

Quarterly review of biology, Sept. 1947, p.228. ⅝ col.

"Basically, the book remains unaltered, but it has undergone considerable revision. Some of this has involved a reassembling of material calculated to aid the student . . . Clark has accomplished an excellent job in his difficult task of first revision, and the book remains unquestionably among the foremost texts in its field." *W. L. Straus, jr.*

Redshaw, J. S. Ships; a study in modern shipbuilding. 116p. 1947. Muller, London, 10s. 6d. net.

Shipbuilder and marine engine-builder, Sept. 1947, p.538. ¾ col.

"Unquestionably, this is the most attractive book about shipbuilding which the reviewer has had the privilege of perusing for many a day . . . Provides a fascinating picture of the varied activity and well-integrated organisation of a modern shipbuilding establishment . . . Not only has Mr. Redshaw brought to his task all the lore and learning derived from his long association with ship design and construction . . . But he has succeeded in endowing the book richly with that craftsmanship and artistry which one has seen in the many handsome vessels which have been created at Barrow . . . Ships' engines are not neglected in the story, nor are the fitting-out processes; while ship-repair and maintenance are given a chapter to themselves . . . Handsomely illustrated."

Ridenour, Louis N., ed. Radar system engineering. 748p. 1947. McGraw, New York, $7.50. (M.I.T. radiation laboratory series, v.1.)

Aeronautical engineering review, Oct. 1947, p.62. ¾ col.

"This excellent work is intended to serve as a general treatise and reference book on the design of radar systems. It is largely devoted to a discussion of microwave pulse radar, since by far the most work has been put into this type of equipment . . . Reveals many aspects of the extensive development work on radar carried out during World War II."

Electronics, Nov. 1947, p.266. 1⅝ col.

"The Radiation Laboratory Series . . . is a remarkable undertaking, in fact, a monument. Volume I deals, quite properly with the broad radar picture, describing the components, the subassemblies, and the numerous radar systems. Although the subject matter is technical the editor . . . is correct when he says in his preface 'no special mathematical, physical, or engineering background is needed to read and understand this book,' although it is barely possible that he has perpetrated one of the greatest understatements of the technical world when he says that 'radar is a very simple subject.' The complexity of radar, the fascination of the things radar can do, the sidelights on its history and usage one finds in this volume, the truth that unbelievably complicated electronic circuits were developed complete and ready to go during the short life of the Radiation Laboratory—the fact that this book is interesting to read as well as worthwhile from the technical standpoint—all indicate that Volume I should rank high on engineers' purchase orders." *K. H.*

General Electric review, Nov. 1947, p.57. ⅝ col.

"In evolving this general treatise and reference book on the principles of design of radar systems, Dr. Ridenour has succeeded in coordinating, without noticeable duplication, the contributions of the numerous authors on closely related topics . . . Divided quite logically into three broad classifications: an introduction to the field of radar (including a brief historical background) and general considerations of the problems of system design; the essential design considerations for the various important components; and two rather detailed examples of actual system design and performance." *L. M. Leeds.*

Tele-tech, Sept. 1947, p.93. ½ col.

"The basic material, the collective work done at a great many places; industrial, military and college laboratories are described . . . The Radiation Lab. of M.I.T. operating under a NDRC contract undertook to prepare a complete record of the vast amount of work done on Radar and associated subjects. This book, the first in a series of 28, is intended to serve as a general treatise and reference work on the design of radar systems . . . Deals primarily with

microwave pulse radar, since the overwhelming majority of this work has been concerned with such equipment. The superiority of microwaves for almost all radar purposes is now clear."

Rosser, J. Barkley, and others. Mathematical theory of rocket flight. 276p. 1947. McGraw, New York, $4.50.

Aeronautical engineering review, Oct. 1947, p.61. ⅝ col.

"Work on the ballistics of fin-stabilized rocket projectiles carried out at the Alleghany Ballistics Laboratory during 1944 and 1945 is described in this final report to the Office of Scientific Research and Development. Included is a considerable amount of expository material which was added to the report after the removal of secrecy restrictions . . . Represents a valuable contribution to the theoretical study of rockets in flight . . . While intended especially for readers with scientific training, the authors have endeavored to make the volume understandable, for those who must avoid mathematics, by supplying simple explanations at the beginnings of most sections, telling what is to be accomplished in them."

Rusinoff, Samuel E. Practical descriptive geometry. 259p. 1947. American Technical Soc., Chicago, $3.50.

Die castings, Oct. 1947, p.48. ¼ col.

"A thorough presentation of the principles of descriptive geometry is accomplished in such a manner that the application of these principles to actual engineering or drafting room problems is apparent. The author treats such subjects as intersection of planes, curved lines and surfaces, and the development of curved surfaces so that the information may be put to work solving actual problems in design."

Industry and power, Nov. 1947, p.116. ¼ col.

"Practicality and simplicity are the keynotes of this book. It goes beyond the usual book in that it deals with practical applications of the principles of descriptive geometry to problems encountered day in and day out in the shop, drafting room, and in general engineering work. Instead of dealing in an abstract manner with points, lines, and surfaces, actual examples are presented which are of practical value."

Machinery (New York), Nov. 1947, p.223. ⅜ col.

"Practical application and simplicity of treatment are distinguishing features of this new text-book on descriptive geometry. The aim of the author . . . is to explain the basic principles of the subject and show how descriptive geometry is applied in the automotive, machine tool, aviation, and steel industries, and related fields."

Production engineering & management, Oct. 1947, p.114. ¼ col.

"Develops the principles and procedures of descriptive geometry in the situations in which they will be used in modern industry. A few of the features . . . are: time-saving methods that will save days in getting an idea off the drafting board; representative problems from a wide variety of fields; elimination of unimportant steps; industry tested methods of presenting the engineering shops with drawings that save them hours of time and labor."

Sandars, Edmund. Insect book for the pocket. 349p. 1946. Oxford Univ. Press, London, 10s. 6d. net.

Natural history, Sept. 1947, p.334. ⅔ col.

"A book on British insects dealing chiefly with those having a length of 'half an inch or more' but including many smaller ones . . . Gives a simple discussion of habits, reproduction, growth, and classification, followed by accounts of the various orders and families. In this way, the author has brought into one volume most of the interesting facts about the habits and unusual developments in the life stages of insects and their relatives, and many of the kinds discussed are similar to related insects occurring in America . . . May serve as a guide to all amateurs interested in classification. Many of the 35 colored plates are of fine quality, and most of the numerous other illustrations are good . . . Contains much information not found in American popular books, and while the terminology may differ from ours, the book is recommended to all who are at all interested in the study of insects." *C. H. Curran.*

Nature, Oct. 25, 1947, p.553. ½ col.

"An accurate and well-written little book. The coloured plates and text-figures are adequate for their purpose and there is a useful list of works for consultation. A pleasing feature running through the pages is the indication (in brackets) of the meanings of the generic and specific names referred to: also the price . . . is very reasonable under present-day conditions." *A. D. I.*

Sauchelli, Vincent. Manual on fertilizer manufacture. 126p. 1947. Davison Chemical Corp., 20 Hopkins Pl., Baltimore, $4.

Chemical and engineering news, Sept. 29, 1947, p.2850. ⅝ col.

"A well-prepared comprehensive manufacturing treatise on the fertilizer industry written by a qualified author who is director of agricultural research of the Davison Chemical Corp., probably the largest producer of superphosphate in a single plant in the world. The author naturally discusses the various details of the manufacturing processes mainly along the lines developed in his own company's operations. However, he does not restrict his comments and observations to such operations but makes them broad enough to cover fertilizer manufacturing operations of all kinds . . . The first comprehensive manual devoted almost completely to sound practical fertilizer manufacturing practices that has come to this reviewer's attention . . . Recommended for every fertilizer factory . . . A book that was badly needed and has been well done." *F. S. Lodge.*

Seiden, Rudolph, ed. Poultry handbook. 410p. 1947. Van Nostrand, New York, $6.

Poultry tribune, Oct. 1947, p.41. ⅜ col.

"Intended for the use of farmers, veterinarians, research workers, county agents, and hatcheries, this . . . book is an encyclopedia of poultry information. Arranged in alphabetical order are discussions and explanations of hundreds of common and scientific terms used in the poultry fields . . . A great amount of information is presented in a much different form than has heretofore been attempted in the poultry publishing field. Opinions may vary as to the relative importance of some of the subjects listed, but the material presented is accurate. According to the publisher, 'Every statement is based on the official facts, findings, figures and recommendations compiled from the vast research of the United States Department of Agriculture and hundreds of poultry experts'."

Shores, Louis. Highways in the sky. 269p. 1947. Barnes, New York, $3 (A.A. C.S. ed., $5).

Aero digest, Nov. 1947, p.62. ¼ col.

"A fascinating, unique history of the Army Airways Communications System, admirably planned and executed out of personal experience by a man who writes exceedingly well."

Electronics, Oct. 1947, p.262. ½ col.

"The story of the Army Airways Communications System . . . Filled with dramatic anecdotes of radio operators working right through strafing and bombing attacks on airport control towers to keep homing beacons in operation, bring planes down safely, and send and receive vital messages. Every radio man will enjoy the adventures set down in print here for the first time as the AACS history." *J. M.*

Simonsen, J. L. The terpenes. Ed.2, revised by J. L. Simonsen and L. N. Owen. v.1: The simpler acyclic and monocyclic terpenes and their derivatives. 479p. 1947. Cambridge Univ. Press, London, 30s. net.

Journal of physical and colloid chemistry, Nov. 1947, p.1451. 12 l.

"About the only comprehensive work . . . covering the field of the terpenes . . . The plan and scope of the second edition follow closely those of the first. In fact, this may be considered more of a reprinting, with some additions, of the first edition than a truly new edition, for many of the sections are merely reprints of those occurring in the first edition. The literature 'has been consulted up to the end of 1945, and it has proved possible to include also some work of a later date'." *Lee Irvin Smith.*

Nature, Sept. 20, 1947, p.384. 1⅛ col.

"Dr. Simonsen's comprehensive treatise, first issued in 1931, is valued alike by specialists in terpene chemistry and organic chemists in general . . . The plan and scope of the work remain unaltered . . . Beautifully printed, with neat and clear structural formulæ, and each page carries its own documentation." *John Read.*

Smith, Edward S., and others. Unified calculus. 507p. 1947. Wiley, New York, $3.50.

American scientist, Oct. 1947, p.582. 11 l.

"Distinguished from its predecessor, 'Calculus,' written by the same authors and published in 1938, by increased emphasis on early and frequent applications of integration, it also lays greater stress on differentials. Among other improvements are a different treatment of velocity components and indeterminate forms, and emphasis on the application to physics and chemistry."

Science, Oct. 10, 1947, p.354. ½ col.

"While much of the text is identical with that of its excellent predecessor, there are many simplifications and clarifications which will please discriminating students and teachers. The typography is excellent, the cuts are clear and suggestive, and the somewhat smaller format which grew out of the necessity of paper conservation has not impaired the excellence of the presentation but should make the text look a little less formidable to the student. The reviewer is anxious to give it a first-hand working over with his classes this fall." *Walter F. Shenton.*

Strausbaugh, Perry D., & Weimer, B. R. General biology. Ed.2, revised. 718p. 1947. Wiley, New York, $4.75.

Nature magazine, Oct. 1947, p.397. ¼ col.

"The book has been largely rewritten and many illustrations have been added. Its scope is to present the fundamentals covered in a one-year course in general biology, and particular stress is placed upon the scientific method that has led to important biological discoveries. The last emphasis reflects the fact that changes take place so rapidly that special stress upon principles is needed."

Science, Sept. 12, 1947, p.252. ½ col.

"The style of the book attains conciseness without the dull, laconic quality sometimes observed in texts covering so broad a field. Physiological concepts are stressed at a level that is neither superficial nor confusing in technicalities. Index and glossary are combined, and bibliographies are eliminated except for occasional footnotes. Long book lists serve no practical purpose, since most instructors prefer to select their own supplementary readings. The typography and well-labeled illustrations are excellent and, for a full-year course, the text is highly recommended." *George L. Church.*

Scientific American, Oct. 1947, p.186. ¼ col.

"Broader (not deeper) than most college texts in biology, swinging through a wide arc of related sciences." *A. G. I.*

Sumner, James B., & Somers, G. F. Chemistry and methods of enzymes. Ed.2, revised and enlarged. 415p. 1947. Academic Press, Inc., 125 E. 23rd St., New York, $6.50.

Chemical and engineering news, Oct. 13, 1947, p.3029. 1 col.

"The first chapter deals with the general properties of enzymes; the final chapter, with carbohydrate metabolism. The remainder of the book is devoted largely to a formalized treatment of the better-known enzymes. The style is simple, lucid, and concise; therefore, the book is easy to read and free of ambiguities . . . Essentially a textbook rather than a handbook. Nevertheless, it is a valuable guide to the research worker . . . The revision brings the book fairly well up to date, although there are a few apparent omissions that might be considered of importance . . . Can be wholeheartedly commended to both the student and the research worker." *Bernard Axelrod.*

Journal of chemical education, Oct. 1947, p.517. ½ col.

"For those who desire a brief review of the whole field of enzymes, their source and function, the measurement of their activity, their activation, inactivation, and methods of purification, this book may be recommended." *Clifford S. Leonard.*

Swingle, D. B. Textbook of systematic botany. Ed.3. 343p. 1946. McGraw, New York, $3.50. (McGraw-Hill publications in the botanical sciences.)

Bulletin of the Torrey Botanical Club, Sept.-Oct. 1947, p.426. 1¼ p.

"There is perhaps little point in completely reviewing this edition of a well known and widely used textbook except to examine it in the light of the publisher's note on the dust jacket which states that it 'meets the demand for a textbook that approaches the subject by way of genetics, ecology, cytology, and geography.' While it is admitted that mention of these items as they affect a study of systematics does differentiate this edition from the earlier

ones, one cannot help but regret that even more consideration was not given them. However, it should perhaps be held in mind that it may not have been Professor Swingle's intention that this text be addressed to advanced students but, rather, to beginners who, presumably, would have no more background than a first course in General Botany. This, therefore, would limit the extent to which he could pursue these highly important topics. The mere fact that one finds them more than casually mentioned in a textbook of systematics is encouraging." *W. H. Camp.*

Thiesmeyer, Lincoln R., & Burchard, J. E. Combat scientists. 412p. Little, Boston, $5. (Science in World War II series.)

Chemical and engineering news, Nov. 10, 1947, p.3320. 1 col.

"The story of the Office of Field Service, a major subdivision which OSRD created when the ingenious mechanisms were pouring from production lines to the theaters of combat . . . The authors were combat scientists and write not only authoritatively, but with a degree of fascination that will hold the reader's interest from cover to cover. Those who participated in scientific and technical missions in Germany or Japan during or after the war will recognize and enjoy (in retrospect) many situations described vividly but with complete regard for the truth." *Walter J. Murphy.*

Scientific American, Nov. 1947, p.234. ¼ col.

"One of a series of volumes on the history of the war-famous Office of Scientific Research and Development, this book gives a running account of the operations of the Office of Field Service . . . Here is applied science working under stress; here is the factual story of the struggle of science to preserve a nation." *A. P. P.*

Titterton, George F. Aircraft materials and processes. Ed.3, revised. 537p. 1947. Pitman, New York, $4.75.

Aeronautical engineering review, Sept. 1947, p.69. ⅝ col.

"The author has included many of the new materials and processes for aircraft applications developed during the late war. In order to keep the revised edition up to date for as long a time as possible, he has even included basic data on materials that have not yet been fully accepted but show promise . . . General in scope and . . . based on a series of lectures given by the author at New York University . . . Printed on paper of good quality and contains excellent illustrations and drawings. The data have been collected from many sources . . . Appendixes contain extensive reference data for the aircraft engineer."

Walsh, J. W. T. Textbook of illuminating engineering. 191p. 1947. Pitman, London, 17s. 6d. net.

Electrician, Oct. 10, 1947, p.1079. 1¼ col.

"Examinations cannot be passed solely by the cramming of textbooks, but Dr. Walsh's latest work, in conjunction with attendance at one of the many technical institute courses available in illuminating engineering, will enable any average student to pass the City and Guilds Intermediate Examination in that subject. The book is based, and adheres very closely to, the syllabus of the examination, and the text is written in a clear and comprehensive manner and is illustrated by means of well executed diagrams . . . Dr. Walsh . . . is to be congratulated on writing a concise and up-to-date textbook which will be welcomed by teachers and students alike. It is to be hoped that he will complete his good work by writing a companion volume covering the syllabus of the Final Grade Examination." *J. B. H.*

Gas world, Sept. 13, 1947, p.377. 1⅛ col.

"A book of considerable interest and help to lighting engineers and illuminating engineering students . . . Covers the intermediate grade and has been specially written to assist students who are preparing for the examination in illuminating engineering of the City and Guilds of London Institute . . . Adequately covers the subject, although written as concisely as possible . . . Does not deal with 'mathematics to the standard of a third-year senior course' and 'right up to Inter-B.Sc. standard,' it being assumed that the reader has already covered that ground."

Walshaw, A. C. Applied thermodynamics. 401p. 1947. Blackie, London, 30s. net.

Mechanical world, Oct. 31, 1947, p.449. ⅝ col.

"Essentially a textbook for the use of students preparing themselves for university degrees in engineering or the examinations of the professional institutions, this new book by Dr. Walshaw is well suited to its purpose . . . Carefully written and edited and full use has been made of the resources of typography with resulting advantage to the book. It is, however, suggested that more copious documentation throughout would be of real value to the student, who should always be given those references which will enable him to extend his reading on any aspect of his subject should he so desire." *L. A. B.*

Transactions of the Institute of Marine Engineers, Sept. 1947, p.166. ½ col.

"Principally intended for students in the later stages of their primary degree. It is therefore unnecessary—though unfortunately not unusual—that the opening chapters cover elementary and fundamental aspects with which the student should be fully familiar from his earlier studies. The scope is wide, embracing steam plant, internal combustion engines, compressors and refrigeration. Both atomic energy and combustion turbines are introduced, though neither case is adequately covered. Much of the text deals with generalities, while many of the better illustrations are definitely specific and overburdened with unnecessary or irrelevant detail. The remaining simple illustrations are copious and resemble black-board sketches . . . The worked examples will prove useful to both students and teachers, but the list of questions taken from examination papers — principally London B.Sc. and Institution of Mechanical Engineers—should certainly have the year appended or better still be replaced altogether by a bibliography."

Watson, William H. Physical principles of wave guide transmission and antenna systems. 207p. 1947. Oxford, New York, $7.

Electronics, Sept. 1947, p.260. ¼ col.

"A preliminary chapter reviews the impedance concept used in exploring guided wave phenomena. Propagation in wave-guides and auxiliary components is described as background for the development of slot couplings and

radiators, the latter constituting the major portion of this book for design engineers and physicists." *F. R.*

Proceedings of the Physical Society, Sept. 1, 1947, p.902. 1⅝ p.

"It may be said immediately that this is a good book . . . The treatment is concise yet lucid throughout, and . . . Professor Watson has succeeded in bringing out clearly the physical principles involved in the transmission of waves through wave guides. He is to be congratulated on having filled so well a definite gap in the literature of this still quite new field. There is a minor criticism in relation to the title: at first glance one might imagine that the book was intended to deal with antenna systems in general, whereas, in fact, only some of those systems in which the wave guide plays an important part are discussed . . . Well illustrated and produced, but it is a pity that so many references must still be to unpublished work. It is to be hoped that, in so far as it becomes possible, the author will endeavour to remedy this defect in any future editions." *J. A. Saxton.*

Review of scientific instruments, Oct. 1947, p.784. 1⅓ col.

"Professor Watson presents an approach to the understanding of the design and operation of microwave circuits based on a combination of wave and impedance concepts . . . The book shares the excellence of layout, workmanship, and readability of print by which the products of the Oxford University Press can be recognized . . . In the opinion of this reviewer the book is not a complete or thorough enough treatment of the general subject of waveguide transmission and antenna systems to serve a beginner in the field wanting to become well acquainted with present techniques. Rather, it serves as a good grounding for those desiring to work with antenna arrays and as a helpful point of view, called by the author 'more physical,' for those concerned with other aspects of microwaves." *R. V. Pound.*

Weatherhead, A. V. Petrographic microtechnique. 102p. 1947. Arthur Barron, Ltd., 50 Carter Lane, London, E.C.4, 12s. 6d.

Iron and coal trades review, Oct. 3, 1947, p.664. ⅓ col.

"Describes methods developed by the author in his attempts to raise petrological technique to 'the high level commonly acknowledged in the histological field.' Beginning with a simple account of the microscope and the elementary phenomena of the passage of polarised light through crystalline materials, the author describes in detail his methods for preparing thin sections from rock samples and finishes with a chapter on photographic methods . . . Well illustrated by photographs and diagrams."

Winding, Charles C., & Hasche, R. L. Plastics, theory and practice; the technology of high polymers. 280p. 1947. McGraw, New York, $3.50. (McGraw-Hill chemical engineering series.)

American machinist, July 31, 1947, p.164. ⅝ col.

"This volume . . . has for its objective the upgrading of the chemist and chemical engineer. The treatment presumes that the reader will be at the stage where he can readily and facilely refer to standard texts and handbooks for more specific information. The technology of high polymers, with which the book deals, is a broad one, but even the expert will find that the fundamental factors relating to any specific resin or plastic are included."

British plastics, Sept. 1947, p.421. ½ col.

"The main weakness of this book is its attempt to cover too wide a field for its size, but it is a creditable attempt. The treatment of compression moulding in two pages compared with the relatively excessive emphasis on low pressure moulding in seven pages, is worthy of adverse comment. In general, however, the book is fairly well balanced and should be of value to the chemist and chemical engineer for whom it is written and to many others."

Chemical and engineering news, Oct. 20, 1947, p.3108. ¾ col.

"Primarily designed for chemists and chemical engineers who wish to specialize in the field of plastics by building up on their foundation of chemical knowledge. It presupposes a knowledge of organic chemistry . . . Obviously designed for use in teaching chemistry students the specialized field of plastics . . . Should serve this purpose well. Its proper use as a text, along with a well-planned college course, should give the plastics industry better trained college men than have previously been available." *W. C. Goggin.*

Chemical engineering, Aug. 1947, p.276, 278. ⅜ col.

"A chemical engineers' book designed to take up where standard organic texts and handbooks stop . . . Gives a person becoming familiar with the technology of high polymers an opportunity to utilize his background and improve his knowledge of those high polymers which are now produced commercially or show promise of commercial application . . . Will serve as a valuable asset to every chemist and chemical engineer interested in up-grading himself in the wide field of high polymers . . . Crams a wealth of information into a relatively small number of pages. Although an expert in some phase may feel that the book spends too much time on fundamentals, the average engineer will find that the logical sequence of the presentation has much in its favor." *Richard F. Warren.*

Scientific American, Sept. 1947, p.139. ⅛ col.

"Provides a rather general view of a very broad field. All of the more common commercially produced plastics materials and their applications are discussed, as are the various methods of fabrication. Also included are 19 pages of convenient tables containing listings of the principle [sic] plastics manufacturers, along with their products, and the comparative physical properties of those products . . . An excellent coverage, but one which is intended only for those with a sound background in organic chemistry." *N. H. U.*

Young, Stanley P. The wolf in North American history. 149p. Caxton, Caldwell, Idaho, $3.50.

Fauna, Sept. 1947, p.96. ⅓ col.

"Cattle and sheep men will probably be the most appreciative readers of this book. Heavily interlarded with quotations from older writers, it may seem rather tedious to many persons with other interests. The pictures, in the main, are not well selected and are poorly reproduced."

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Errata in Volume 13

For "Steiner, Kalmar" (p.17) read Steiner, Kalman.

The following entry (accurately copied from the review itself) is incorrect, and has been corrected in making the Author Index.

For "Ingham, Douglas E." (p.87) read Hinde, Douglas W., & Ingham, H. E.

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